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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,945	12/19/2001	William D. Denison	215001	8390

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EXAMINER	
ZIMMERMAN, BRIAN A	

ART UNIT	PAPER NUMBER
2635	

DATE MAILED: 11/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Interview Summary	Application No.	Applicant(s)	
	10/024,945	DENISON ET AL.	
	Examiner	Art Unit	
	Brian A Zimmerman	2635	

All participants (applicant, applicant's representative, PTO personnel):

(1) *Brian A Zimmerman*. (3)*William Denison*.

(2) *Joe Kinsella*. (4)*Ed Bishop*.

Date of Interview: 10-25-04.

Type: a)☒ Telephonic b)☐ Video Conference
c)☐ Personal [copy given to: 1)☐ applicant 2)☐ applicant's representative]

Exhibit shown or demonstration conducted: d)☐ Yes e)☐ No.
If Yes, brief description: _____.

Claim(s) discussed: *proposed claims attached*.

Identification of prior art discussed: *Henderson*.

Agreement with respect to the claims f)☐ was reached. g)☐ was not reached. h)☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: *applicant pointed out that the permanent access code is permanently stored even though it is not allways activated. The applicant also pointed out that the number keys can be used to wake up the battery powered access device*.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews
Paragraph (b)
In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:
1) A brief description of the nature of any exhibit shown or any demonstration conducted,
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
   (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

PROPOSED AMENDMENT
SERIAL NUMBER 10/024,945
EXAMINER BRIAN A. ZIMMERMAN

40. (Currently Amended) A method of assembling an electronic access control device having a microprocessor-based control circuit including a microprocessor and a non-volatile memory for storing an access code for controlling operation of the electronic access control device, comprising:

connecting to a communication port in the microprocessor-based control circuit, the communication port being connected to the microprocessor-based control circuit for accessing the non-volatile memory;

sending a read signal through the communication port to the microprocessor-based control circuit to trigger the microprocessor-based control circuit to transmit the access code stored in the non-volatile memory; ~~and,~~

receiving a transmission of the access code through the communication port by the microprocessor-based control circuit in response to the read signal; and,

wherein the access code is a permanent access code.

41. (Currently Amended) A method of entering a user-programmed access code into a battery-powered electronic access control device having a keypad and a microprocessor-based control circuit including a microprocessor and a memory storing a permanent access code, comprising:

pressing any of at least two keys on the keypad to trigger a transition of the microprocessor from a sleep mode with reduced power consumption to an operation mode;

pressing a program key on the keypad to indicate to the microprocessor initiation of a code programming operation, the program key being wired to one of multiple interrupt pins of the microprocessor;

entering the permanent access code using alpha numerical keys on the keypad; ~~and~~

after entering the permanent access code, entering the user-programmed access code using the alphanumerical keys of the keypad; and,

wherein the keys on the keypad to trigger a transition of the microprocessor from a sleep mode with reduced power consumption to an operation mode include the alpha numerical keys.

42. (Currently Amended) A method of assembling an electronic access control device for mounting on a storage device, the access control device having a microprocessor-based control circuit including a microprocessor and a non-volatile memory for storing a permanent access code for controlling operation of the access control device, the method comprising:

installing the non-volatile memory in the microprocessor-based control circuit for accessing the non-volatile memory;

sending a write signal through the communication port to the microprocessor-based control circuit to indicate ~~and~~ an access code is to be written into the non-volatile memory; and

writing said permanent access code to the non-volatile memory through the communication port.

43. (Currently Amended) A battery-powered electronic access control device comprising:

a keypad having at least one row of keys mounted thereon, comprising a program key, for pressing by a user to enter user input;

a microprocessor-based control circuit comprising a microprocessor and a non-volatile memory storing a permanent access code, the microprocessor having multiple inputs for receiving an interrupt signal, and the program key of the keypad being connected to one of the multiple inputs, the microprocessor being programmed to enter a sleep mode to conserve battery power between operation and to awaken from the sleep mode upon the pressing of any of at least two keys on the keypad, including the keys on the keypad used to program an access code;

the microprocessor-based control circuit being connected to the keypad for receiving user inputs entered through pressing the keys of the keypad, the microprocessor being configured to switch from the sleep mode into an operation mode and to enter a code programming operation in response to a pressing of the program key, receive a first key code through the keypad in response to detecting the pressing of the program key, compare the first key code with the permanent access code in the non-volatile memory, receive a second key code through the keypad, and store the second key code in the volatile memory as ~~an~~ the access code for the access control device if the first key code matches the permanent access code in the non-volatile memory.

44. (Previously Presented) An electronic access control device as in claim 43, wherein the microprocessor is further configured to display an error message if it detects that the program key has been pressed out of sequence.

45. (Previously Presented) An electronic access control device as in claim 43, wherein the keypad further includes a clear key, and the microprocessor is further configured to wait for a pre-selected period of time in response to detecting a pressing of the clear key.

46. (Previously Presented) An electronic access control device as in claim 43, wherein the microprocessor is further configured to disable operation of the electronic access control device for a pre-selected period of time if the microprocessor has received a pre-selected number of invalid inputs consecutively entered through the keypad.

47. (Previously Presented) An electronic access control device as in claim 43, wherein the microprocessor is further configured to generate an error message if it detects a lapse of a pre-selected time between two consecutive keypad key entries.

48. (Previously Presented) A method as in claim 40, wherein the non-volatile memory contains a serial number for the electronic access control device stored therein, and further including the step of receiving a transmission of the serial number through the communication port.

49. (Previously Presented) A method as in claim 42 further including the step of writing a serial number for the electronic access control device into the non-volatile memory through the communication port.

50. (Previously Presented) An electronic access control device comprising:

a microprocessor-based control circuit comprising a microprocessor and a non-volatile memory; and

a communication port connected to the microprocessor-based control circuit;

the microprocessor being programmed to receive a write signal through the communication port when the non-volatile memory does not contain a permanent access code for the access control device, receive a permanent access code through the communication port in response to the write signal, and write the receive permanent access code into the non-volatile memory.

51. (Previously Presented) An electronic access control device as in claim 50, wherein the microprocessor is further programmed to receive a serial number for said electronic access control device and write the serial number into the non-volatile memory.

52. (Currently Amended) An electronic access control device comprising:

a microprocessor-based control circuit comprising a microprocessor and a non-volatile memory containing an access code for the electronic access control device; and

a communication port connected to the microprocessor-based control circuit,

the microprocessor being programmed to receive a read signal through the communication port, and in response to the read signal transmit the access code in the non-volatile memory out through the communication port; and,

wherein the access code is a permanent access code.

53. (Previously Presented) An electronic access control device as in claim 52, wherein the non-volatile memory further contains a serial number for said electronic access control device, and wherein the microprocessor is further programmed to transmit the serial number through the communication port.

54. (Currently Amended) An electronic access control device comprising:

a microprocessor-based control circuit comprising a microprocessor and a non-volatile memory containing a stored access code, the microprocessor having at least two interrupt inputs;

a battery for powering operation of the access control device;

a keypad having multiple keys connected to the interrupt inputs of the microprocessor, wherein pressing any of at least two keys of the keypad used to enter an input access code sends an interrupt signal to the microprocessor through one of the interrupt inputs; and

a lock actuator operatively controlled by the microprocessor,

the microprocessor being programmed to receive [an] the input access code through the keypad, compare the input access code with the stored access code in the non-volatile memory, and activate the lock actuator if the input access code matches the stored access code, the microprocessor being further programmed to enter a sleep mode between operations to conserve battery power and to switch from the sleep mode to an operation mode upon receiving an interrupt signal through one of the interrupt inputs.

55. (Previously Presented) An electronic access control device as in claim 54 wherein the microprocessor-based control circuit includes a low-battery detection circuit that is enabled by the microprocessor in the operation mode for measuring a voltage of the battery and disabled when the microprocessor is in the sleep mode.

56. (Previously Presented) An electronic access control device as in claim 54 wherein the lock actuator includes a solenoid control circuit for energizing a solenoid, the solenoid control circuit being controlled by the microprocessor and being enabled when the microprocessor is in the operation mode, the solenoid control circuit having first and second energized states controlled by a timer to energize the solenoid in the first

energized state for a pre-selected first time interval at a first power level to move a plunger of the solenoid into a retracted position, and subsequently to energize the solenoid in the second energized state at a second power level to maintain the plunger in the retracted position for a second pre-selected time interval, the second power level being non-zero and lower than the first power level.

57. (Currently Amended) An electronic access control device as in claim 54, wherein the keypad includes a program key connected to one of the interrupt inputs of the microprocessor, and wherein the microprocessor is programmed to enter a code programming sequence in response to a pressing of the program key, receive a first input code from the keypad, compare the first input code with the stored access code in the non-volatile memory, receive an additional access code from the keypad if the first input code matches the stored access code, and store the additional access code in the non-volatile memory.

58. (Previously Presented) An electronic access control device as in claim 54, further including a communication port connected to the microprocessor-based control circuit for sending an access code to the microprocessor-based control circuit for writing into the non-volatile memory to form the stored access code.

59. (Previously Presented) An electronic access control device as in claim 58, wherein the microprocessor is programmed to receive a serial number for said electronic access control device through the communication port and write the serial number into the non-volatile memory.

60. (Previously Presented) An electronic access control device as in claim 54, further including a communication port connected to the microprocessor-based control circuit, and wherein the microprocessor is programmed to receive a read signal through the communication port and in response to the read signal to transmit the stored access code through the communication port.

61. (Previously Presented) An electronic access control device as in claim 59, wherein the non-volatile memory further contains a serial number for said electronic access control device, and wherein the microprocessor is further programmed to transmit the serial number through the communication port.

62. (Previously Presented) An electronic access control device comprising:

a lock;

a solenoid coupled to the lock for opening and closing the lock;

a battery having a voltage for providing power to energize the solenoid;

a microprocessor-based control circuit comprising a driver circuit for energizing the solenoid and a timer, the control circuit controlling the driver circuit to supply a first amount of power from the battery sufficient to energize the solenoid to move a plunger of the solenoid into an open position to allow opening of the lock and then to supply a non-zero second amount of power from the battery that is lower than the first amount to energize the solenoid to hold the plunger in the open position until a preset time of about 3 seconds has elapsed as specified by the timer.

63. (Withdrawn)

64. (Previously Presented) A method as in claim 42, further including the step of writing a command through the communication port into the non-volatile memory to disable the permanent access code for the electronic access control device.

65. (Cancelled)

66. (Cancelled)

67. (Currently Amended) A method comprising the steps of:

storing an access code within a non-volatile memory;

providing a wake-up signal in response to pressing any of at least two keys of a keypad used to enter an input code;

waking-up a microprocessor for a period of time in response to the wake-up signal;

transmitting an input code to the microprocessor;

comparing the input code with the access code during the period of time;

activating a lock actuator if the input ~~access~~ code matches the access code;

entering a sleep mode after the period of time, wherein during the sleep mode the microprocessor operates at a lower power consumption rate than when the microprocessor is awake.

68. (Previously Presented) The method of claim 67 wherein the access code is a permanent access code.

69. (Previously Presented) An apparatus comprising:

a non-volatile memory containing an access code;

a circuit generating a wake-up signal in response to pressing any of at least two keys of a keypad used in entering an input code;

a processor that is woke-up for a period of time in response to the wake-up signal, compares [an] the input code with[in] the access code, and generates a signal to activate a lock actuator if the input code matches the access code;

wherein the processor enters a sleep mode after the period of time, the sleep mode causing the processor to operate at a lower power consumption rate than when the processor is awake.

70. (Previously Presented) The apparatus of claim 69 wherein the access code is a permanent access code.

71. (Withdrawn) An electronic access control device comprising:

first and second controllers separated from each other, wherein the second controller is shielded from external access and comprising a memory for storing a communication code;

the second controller receiving a request and transmitting the communication code to the first controller;

the first controller receiving an input access signal from a key or keypad, and comparing the input access signal to a stored access code to determine if the input access code is valid;

the first controller sending the communication code to the second controller if the input access code is valid, wherein the second controller provides a signal to energize a circuit to access a lock.

72. (Withdrawn) A method comprising the steps:

storing a communication code in memory of a second controller separated from a first controller, the second controller shielded from external access;

receiving a request and transmitting the communication code from the second controller to the first controller;

transmitting an input access signal from a key or keypad to the first controller;

comparing the input access signal to a stored access code to determine if the input access code is valid;

sending the communication code to the second controller if the input access code is valid, wherein the second controller energizes a circuit to access a lock.

73. (Previously Presented) A method comprising the steps of:

storing a permanent access code within a non-volatile memory;

providing a wake-up signal in response to pressing any key of a keypad;

waking-up a microprocessor for a period of time in response to the wake-up signal;

transmitting an input code to the microprocessor;

comparing the input code with the permanent access code during the period of time;

activating a lock actuator if the input ~~aceess~~ code matches the permanent access code;

entering a sleep mode after the period of time, wherein during the sleep mode the microprocessor operates at a lower power consumption rate than when the microprocessor is awake.

74. (Previously Presented) An apparatus comprising:

a non-volatile memory containing a permanent access code;

a circuit generating a wake-up signal in response to pressing any key of a keypad;

a processor that is woke-up for a period of time in response to the wake-up signal, compares an input code with the permanent access code, and generates a signal to activate a lock actuator if the input code matches the permanent access code;

wherein the processor enters a sleep mode after the period of time, the sleep mode causing the processor to operate at a lower power consumption rate than when the processor is awake.

75. (New) A battery-powered electronic access control device comprising:

a keypad having at least one row of keys mounted thereon, comprising a program key, for pressing by a user to enter user input;

a microprocessor-based control circuit comprising a microprocessor and a non-volatile memory storing ~~an~~ a first access code, the microprocessor having multiple inputs for receiving an interrupt signal, and the program key of the keypad being connected to one of the multiple inputs, the microprocessor being programmed to enter a sleep mode to conserve battery power between operation and to awaken from the sleep mode upon the pressing of any of at least two keys on the keypad, including the keys on the keypad used to program the first access code;

the microprocessor-based control circuit being connected to the keypad for receiving user inputs entered through pressing the keys of the keypad, the microprocessor being configured to switch from the sleep mode into an operation mode and to enter a code programming operation in response to a pressing of the program key, receive a first key code through the keypad in response to detecting the pressing of the program key, compare the first key code with the first access code in the non-volatile memory, receive a second key code through the keypad, and store the second key code in the volatile memory as a new access code for the access control device if the first key code matches the ~~permanent~~ first access code in the non-volatile memory.